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ABSTRACT

The relationship between high school students' attitudes and their involvement in a peer tutoring program for slow learners was examined, on the basis of M. Fishbein's theory of reasoned action, which suggests that the best predictor of behavior is the individual's intention to perform the behavior and that intentions are functions of attitude and perception. Forty-five members of the National Honor Society responded to questionnaires measuring behavioral intention, attitudes toward the behavior, and subjective norms. Results showed that students' intentions to tutor did in fact predict their behavior, but that their attitudes toward the recipients of the tutoring were unrelated or only weakly related to their behavior. Analysis of responses indicated that attitudes toward handicapped or disadvantaged groups are unlikely to be predictive of specific behaviors because measures of such attitudes are not sensitive to the context in which behavior occurs. (CL)

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The Relationship Between High School Students' Attitudes and Actions Toward "Slow Learners"

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University of Vermont

[Final Report]

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Abstract

This study examined the relationship between high school students' attitudes and their involvement in their school's peer tutoring program for "slow learners". Predictions about how attitudes would be related to behavior were derived from a theory developed by Fishbein. Results showed that consistent with Fishbein's theory, the students' intentions to peer tutor were the best predictors of their behavior. Both intentions and behavior were correlated with students' attitude toward their performing this behavior and their perception of the norm governing it. Intentions and behavior also were correlated with variables Fishbein specifies as the determinants of these attitudinal and normative predictors of behavior. In contrast, students' attitudes toward people who receive tutoring were uncorrelated with their behavior. However, their attitudes toward their own tutees were weakly and inconsistently related to their behavior. Results were interpreted as demonstrating that attitudes toward handicapped or disadvantaged groups are unlikely to be predictive of specific behaviors, because measures of such attitudes are not sensitive to the context in which behavior occurs.

The Relationship Between High School Students' Attitudes and Actions Toward "Slow Learners"

Research on attitudes toward mentally retarded people has proliferated in recent years, paralleling the rapid growth in the movement to integrate mentally retarded people with nonhandicapped people. The mainstreaming movement has stimulated attitude research because many believe that its ultimate success or failure depends on public acceptance of retarded people, and that public acceptance depends on attitudes toward these people (Efron & Efron, 1967, Ferrara, 1979; Gottlieb, 1975; Gottlieb & Corman, 1975; Kastner, Reppucci, & Pezzoli, 1979; Meyer, 1980; President's Panel on Mental Retardation, 1964; Voeltz, 1980).

Consequently, much research has been conducted to measure attitudes toward retarded people, to identify the predictors of these attitudes, and to develop effective strategies for changing attitudes (see Gottlieb, 1975 for a review). With few exceptions, however, this research tends not to question the assumption that stimulated it. Does knowledge about attitudes toward mentally retarded people provide a valid basis for predicting how they will be treated?

Gottlieb (1975) pointed out that there have been few attempts to determine whether behavior is consistent with verbally expressed attitudes toward retarded people, and called for an increase in such research. Although other researchers have expressed concern about using attitude surveys to make behavioral predictions (Berdiansky & Parker, 1977; Heal, Sigelman, & Switzky, 1978; Jaffe, 1967; Mitchell, Doctor, & Butler, 1978; Sigelman, 1976), Gottlieb is noteworthy because he acknowledges the existence of an enormous volume of research that raises troubling questions about the assumed relationship between attitudes and behavior.

The study of attitudes historically has been a major preoccupation of social psychologists. Like their counterparts in the field of mental retardation, social psychologists assumed that since one component of attitude is predisposition to behave

in a favorable or unfavorable way toward the attitude object, an understanding of attitudes would contribute to the understanding and prediction of behavior. The precipitating event in social psychologists realization that their most "distinctive and indispensable" concept (Allport, 1968) might be only weakly related to behavior was the publication of Wicker's (1969) review of several decades of research on attitude-behavior consistency. Wicker reported that correlations between attitudes and behavior were rarely above .30 and frequently were near zero. He concluded that, "Taken as a whole, these studies suggest that it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviors than that attitudes will be closely related to actions" (1969, p. 65).

Fortunately, since Wicker's (1969) review appeared there have been a number of theoretical developments that clarify when and how attitudes are related to behavior. One of the most fruitful approaches to understanding the attitude-behavior relations is a theory of reasoned action developed by Fishbein (Ajzen & Fishbein, 1973; Fishbein, 1967; Fishbein & Ajzen, 1975).

Behavioral Intention. Fishbein assumes that most behavior of interest to social scientists is under volitional control, and that people form or have intentions to perform a behavior over which they have control before they act. Fishbein believes, therefore, that the most immediate determinant of behavior is the person's intention. He recognizes, of course, that people may sometimes be prevented from acting on their intentions by their own inability to perform the behavior or by external circumstances. Nevertheless, even though it may sometimes be necessary to consider other variables, accurate behavioral prediction is possible by assessing intentions.

Empirical support for this assumption has been reported in investigations of the strategies college students adopted in playing a laboratory game (Ajzen, 1971; Ajzen & Fishbein, 1970; Fishbein et al., 1970; Hornik, 1970), premarital sex among college students (Fishbein, 1966), use of oral contraceptives and conception of a child among married women (Davidson & Jaccard, 1979), and blood donation during a campus blood drive (Pomazal &

Jaccard, 1976). In all, over 20 correlations between intentions and behavior were computed in these studies. Only one correlation was less than .30 (a correlation rarely exceeded in research on attitude-behavior consistency) and most were above .50. For example, the correlation between married women's intention to use birth control pills and actual use over a two year period was .53. The correlation between intentions to have a child and conception or attempted conception was .68 (Davidson & Jaccare, 1979). In short, this research consistently indicates that intentions are correlated with behavior.

Determinants of Behavioral Intention. Fishbein's theory also specifies the determinants of intention. The predictors of intention are 1) the person's attitude toward performing the behavior and 2) the person's normative beliefs (his or her perception of the likelihood that important referents think he or she should perform the behavior) weighted by his or her desire or motivation to comply with these referents.

The relationships between these attitudinal and normative variables, behavioral intention, and behavior are given by an equation:

$$B \sim BI = [Aact]w_o + \{\Sigma(NB_i)(MC_i)\}w_1,$$
$$i=1$$

where B = behavior; BI = behavioral intention; Aact = attitude toward performing the behavior; NB = normative belief, i.e., the person's perception of the probability that a referent (e.g., a friend) thinks he or she should perform the behavior; MC = motivation to comply with that referent; and w_o and w_1 are empirically determined weighting parameters reflecting the importance of Aact and $\Sigma(NB_i)(MC_i)$ in predicting intention. These weights usually are estimated by the regression coefficients obtained in a multiple regression analysis with intention as the criterion.

All the studies cited previously in support of the relationship between intention and behavior also included measures of the attitudinal and normative determinants of

intention. The average multiple correlation between intention and these predictors was .81 (See Ajzen & Fishbein, 1973 for a review).

It is important to note that the attitudinal predictor of intention is not the person's attitude toward the object of the behavior (e.g., the person's attitude toward retarded people) but rather is the person's attitude toward performing the behavior (e.g., the person's attitude toward volunteering to spend time with a mentally retarded individual). The importance of this distinction can be readily seen in a number of studies. Davidson and Jaccard (1975) found that women's intentions to have a child in the next two years were highly related (.80) to their attitude toward having a child, but were unrelated (-.04) to their attitude toward children. Similarly, correlations between college women's attitude toward contraceptives and their intentions to use specific contraceptives ranged from -.008 to .447, whereas the correlations between their attitude toward their <u>using</u> specific contraceptives and their intentions to use them ranged from .513 to .700 (Fishbein & Jaccard, 1973).

<u>Determinants of attitude</u>. The final component of Fishbein's theory concerns the antecendants of the individual's general favorableness or unfavorableness toward performing a behavior (i.e., his or her attitude toward the behavior). The theory posits that an individual's attitude toward performing a behavior is determined by 1) his or her beliefs about the likelihood that the behavior will produce certain outcomes or consequences and 2) his or her evaluation of those consequences. For example, if an adolescent believes that a likely consequence of talking with a retarded student is rejection by her friends and evaluates being rejected by her friends negatively, her attitude toward talking with a retarded student should be unfavorable. The relationships between attitude, beliefs, and evaluations are shown by an equation:

$$Aact = \sum_{i=1} b_i \, e_i$$

where Aact = attitude toward performing the behavior; b_i is the perceived likelihood that performing the behavior will result in a specific consequence; and e_i is the individual's evaluation of that consequence.

Fishbein and Ajzen (1975) argue that although people may have many beliefs about the consequences of a behavior, because there are limits in attention span and ability to process information, only a few of these beliefs will determine their attitude toward the behavior at any given moment. These "salient" beliefs are identified by asking a sample from the population whose behavior is of interest to list as many consequences of the behavior as they can. Those consequences listed most frequently are considered to be salient.

Consistent with the theory's proposals about the determinants of attitude, a number of studies have shown that attitude toward a behavior is highly correlated with the weighted sum of the person's beliefs and evaluations (Ajzen & Fishbein, 1970; 1972; Davidson & Jaccard, 1975).

In a similar way, referents who are salient for a population can be identified by asking a sample to list people who would approve or disapprove of their performing the behavior. Those listed most frequently are considered to be salient. Moreover, the theory proposes that individuals' beliefs about what specific salient referents think they should do weighted by their motivation to comply with these referents should be highly correlated with their perception of what <u>most people</u> who are important to them think they should do. Their perception of what most people think they should do is called the subjective norm, and can be substituted for $\Sigma(NB_i)(MC_i)$ in the equation for predicting behavioral intention. Thus, the subjective norm is an abbreviated measure of the normative component of the theory.

To summarize Fishbein's theory of reasoned action provides a simple, empirically supported framework for specifying when and how attitudes are predictive of behavior. It proposes that the best predictor of behavior is the individual's intention to perform the behavior. Behavioral intentions in turn have been shown to be a function of the individual's attitude toward the

behavior and his or her perception of the norm governing the behavior. Furthermore, Fishbein argues that attitude toward the object (the measure used in most of the unsuccessful attempts to relate attitudes and behavior) is inconsistently or weakly related to behavior.

The purpose of the present study was to demonstrate how Fishbein's theory can be used to understand the relationships between high school students' attitudes and their involvement in a program to peer tutor slow learners in their school. These slow learners included students classified as mentally retarded, emotionally disturbed, or learning disabled, and educationally disadvantaged students participating in a remedial program funded by Title 1.

This research had five specific objectives. The first was to examine the relationship between students' intentions to peer tutor and their involvement in this program. The second objective was to determine if behavioral intentions with respect to peer tutoring are predictable from the students' attitude toward the behavior and their perception of what other people think they should do (i.e., subjective norm). In addition, since the attitudinal and normative components of the theory are thought to influence behavior via their impact on the formation of intention, behavior also should be predictable from the attitudinal and normative components of the theory. In other words, the theory proposes that behavioral prediction should be possible by substituting the antecedents of behavioral intention for a direct measure of intention.

In a similar way, the third objective of this study was to determine whether the determinants of attitude toward the behavior (i.e., beliefs about the consequences weighted by evaluation of those consequences) and the determinants of the subjective norm (beliefs about specific referents weighted by motivation to comply) would predict behavioral intention and behavior. A closely related objective was to identify specific beliefs about the consequences of peer tutoring, evaluations of these consequences, beliefs about what specific referents think students should do, and motivation to comply with these referents

that discriminate between students who intend and to not intend to peer tutor.

Pomazal & Jaccard (1976) used the theory in this way in a study of college students' intentions to donate blood. Following the procedures outlined by Fishbein's theory, they identified beliefs about the consequences of donating blood that were salient to college students. They then compared students who intended and who did not intend to give blood on their perception of the likelihood that these consequences would result from blood donation. They found that compared to those who did not intend to give blood, those who did intend to donate perceived that donating blood was less likely to be painful and time consuming, less likely to result in feeling faint, and more likely to result in free refreshments. Their beliefs about the likelihood that donating blood would give them a feeling of satisfaction and insure them a supply of free blood should they need it did not differ from those who did not intend to give.

This study illustrates one of the benefits of using Fishbein's theory. Consequences that discriminate between intenders and nonintenders may not always be the obvious ones. For example, many publicity campaigns for blood drives stress the positive consequences of giving blood (i.e., it helps other people and insures one a supply of free blood). However, people who did not intend to give blood agreed with people who intended to give blood about the likelihood of these positive consequences of blood donation. In other words, such publicity campaigns focus on consequences that both intenders and nonintenders perceive as a likely result of blood donation.

The final objective of this study was to test Fishbein's proposal that attitude toward the object of the behavior (i.e., people who receive peer tutoring) will be unrelated or only weakly related to behavior. According to Fishbein, any variables other than those specified by the theory will be related to behavior only if they are correlated with the attitudinal and/or normative determinants of behavioral intention. Variables external to the theory include demographic factors, socioeconomic factors, previous contact with the object of the behavior, and

most importantly, the individual's attitude toward the object of the behavior. Thus, attitudes toward people who receive tutoring will be related to behavior only if they are correlated with attitude toward the behavior and/or the normative component of the theory. Moreover, if there is a close relationship between attitudes toward people who receive tutoring and behavior, the magnitude of this relationship will be reduced considerably by statistically holding constant the attitudinal and normative variables included in Fishbein's theory.

Method

Subjects

Subjects were 45 members of the National Honor Society (NHS) at a local high school that enrolls approximately 1000 students. NHS members were selected because only NHS members are permitted to become peer tutors. Prior to their participation, NHS members and their parents were given a written description of the study and asked to sign a consent form if the student agreed to participate.

Peer Tutoring Program

The peer tutoring program is coordinated by the faculty advisor of the NHS. Most students who receive tutoring are either enrolled in special education classes or are participants in a remedial program funded by Title 1. All of the approximately 75 students enrolled in special education courses at this school are on individualized educational programs (IEP's) and all have been formally classified by the school as mentally retarded, learning disabled, or emotionally disturbed. These students take from one to three classes that are reserved for students on IEP's and attend regular classes during the remainder of the day.

The remedial program funded by Title 1 was established to aid educationally disadvantaged students. To be eligible for this program, a student must be at least one year behind grade level, but the majority of ninth and tenth graders who participate in this program are working at fifth to seventh grade levels.

Special education students and participants in the remedial

program typically receive tutoring at the request of their teachers, and require tutoring throughout the academic year. Any student in the school can request tutoring, but such requests occur infrequently, and the students who make them typically require only short-term tutoring (e.g., just before exams).

When the NHS advisor receives a tutoring request, she asks for volunteers at a meeting of the NHS. NHS members who volunteer then meet with the tutees on an individual basis. The timing of these meetings depends on when the NHS member and the tutee have free periods. Thus, the NHS members' class schedule places some constraints on how many opportunities they have to peer tutor.

Those who volunteer to peer tutor are encouraged to meet with their tutees regularly (1 to 2 hours per week). Thus, doing one-to-one peer tutoring requires a relatively substantial commitment of these students' time.

Questionnaire Construction

The first step in applying Fishbein's theory to the prediction of behavior is to specify the behavioral criterion. Since the special education and educationally disadvantaged students receive tutoring on a regular basis throughout the year, the behavioral criterion selected was how many hours per week NHS members spend doing one-to-one peer tutoring during two six week intervals.

A questionnaire was then prepared to assess the variables Fishbein specifies as the predictors of behavior. All variables were assessed on 7-point bipolar scales. The measure of behavioral intention was

I intend to spend 1-2 hours a week doing one-to-one peer tutoring during the next six weeks.

likely ___:___:___:___:___:___:___ unlikely

A second item assessed the students' attitude toward the behavior. It should be noted that this measure referred specifically to the students attitude toward their performing the behavior. The format of this measure was:

My spending 1-2 hours a week doing one-to-one peer tutoring during the next six weeks is:

good ___:___:___:___:___:___:___ bad

rewarding ___:___:___:___:___:___:___ punishing

unpleasant ___:___:___:___:___:___:___ pleasant

Each student's attitude score is obtained by summing his/her responses to the three scales. The scales are scored so that a high score is positive. The measure of subjective norm was:

Most people who are important to me think:

I should ___:___:___:___:___:___:___ I should not spend 1-2 hours a week doing one-to-one peer tutoring during the next six weeks.

These three items provide the minimal information needed to test Fishbein's proposal that behavior is predictable from behavioral intention, and that intention is a function of attitude toward the behavior and subjective norm.

The remainder of the questionnaire took one of two forms. The first form (behavioral beliefs form) included measures of students' beliefs about the consequences of peer turoring, their evaluation of these consequences, their beliefs about what specific referents thought they should do with respect to peer tutoring, and their motivation to comply with these referents. Construction of these items required a pilot study to identify consequences of peer tutoring and referents that were salient for these students.

During the Fall term (prior to the induction of new members to the NHS) 15 senior members of the NHS were asked to complete a brief questionnaire. All of these students had been inducted into the NHS during their junior year, and all but one had done a least some peer tutoring during the six weeks preceeding administration of the survey. One question on the survey asked students to list the advantages and disadvantages of their doing one-to-one peer tutoring for 1-2 hours a week during this next six weeks. A second item asked them who would approve or disapprove of their performing this behavior.

Consequences (i.e., advantages or disadvantages) that were listed by at least 25% of these students were considered to be salient behavioral beliefs for this population. These salient

consequences were that peer tutoring would help the tutee, leave enough time for students to do their own work, leave enough time for students to be with their friends, take time, provide an opportunity to meet a new person, and provide enough time to get to know the tutee well. Similarly, referents listed by at least 25% of the students were considered to be salient. These referents were parents, teachers, the NHS advisor, and the person being tutored.

The behavioral beliefs form of the the questionnaire included two questions relevant to each salient consequence of peer tutoring and two questions relevant to each salient referent.

For example, the two questions relevant to the consequence "helps the tutee" were:

My doing one-to-one peer tutoring for 1-2 hours a week during the next six weeks would help the tutee:

likely ___:___:___:___:___:___:___ unlikely

Helping the tutee is:

good ___:___:___:___:___:___:___ bad

The first item is a measure of a belief about a consequence of the behavior; the second item is an evaluation of that consequence.

An example of the two questions developed for each salient referent is:

My parents think

I should ___:___:___:___:___:___:___ I should not spend 1-2 hours a week doing one-to-one peer tutoring during the next six weeks.

Generally speaking, how much do you want to do what your parents think you should do?

very much ___:___:___:___:___:___:___ not at all

The first question is a measure of belief about a specific referent; the second is a measure of motivation to comply with that referent.

To summarize the behavioral beliefs form of the questionnaire included measure of beliefs and evaluations relevant to salient consequences of the behavior, beliefs about specific referents, and motivation to comply with these referents.

The second form of the questionnaire did not include the measures just described. Instead it included measures of the students' attitude toward people who receive peer tutoring (attitude toward the object of the behavior). One difficulty in measuring attitude toward the object of this particular behavior is that the people who receive tutoring are a diverse group, hence reference to any specific handicap or academic problem on the attitude measure might fail to assess attitudes toward the people the NHS students were asked to tutor. Consequently the referent used on the attitude scales was "people who receive peer tutoring".

There obviously are no scales designed to measure attitudes toward this particular group. Consequently, we selected attitude measures that have demonstrated validity as measures of attitudes toward a "disadvantaged" group, but that do not include items that refer to a particular problem or condition.

Two scales that met these criteria were measures of attitudes toward mentally retarded people. The first was an adjective checklist developed by Sipperstein and Gottlieb (1980) to measure attitudes toward mentally retarded children. This checklist includes 16 positive (e.g., healthy, smart, kind) and 16 negative (e.g., cruel, slow, dishonest) adjectives. Respondents are asked to indicate which adjectives describe the group or individual being evaluated, and their attitude score is the number of positive adjectives selected minus the number of negative adjectives selected. A constant of 16 is added to each score to eliminate negative scores.

The second scale included seven bipolar adjective pairs that have been shown by Guskin (1962) to discriminate between ratings of mentally retarded and nonretarded adolescents. These adjective pairs are quiet/talkative, timid/confident, abnormal/normal, likeable/unpleasant, ordinary/strange, capable/helpless, and skillful/clumsy. In the present study, these pairs were presented as 7-point semantic differential scales, and the respondents' attitude score was the sum of their ratings of the target group across the seven pairs. Adjective pairs were scored so that a high score was a positive rating.

The final measure was a 12 item index designed to measure

perceptions of the social desirablility of a targets' personality traits (Dion, Berscheid, & Walster; 1972). This scale has been shown to discriminate between ratings of physically unattractive targets and targets who are average or high in physical attractiveness (Dermer & Thiel, 1975; Dion et al., 1972). Since results of a large volume of research show that observers have negative attitudes toward unattractive people (See Adams, 1978; Berscheid & Walster, 1975 for reviews), scores on this social desirability scale provide an index of the favorableness of respondents' reactions to a target. The items on this scale are poised/awkward, strong/weak, interesting/boring, self-assertive/submissive, sociable/unsociable, dependent/independent, warm/cold, genuine/artifical, exciting/dull, sincere/insincere, sensitive/insensitive, and kind/cruel.

In the present study, these adjectives also were presented on 7-point semantic differential scales, and ratings across all scales were summed to produce a composite attitude score. As with the Guskin scale, items were scored so that a high score was a positive rating.

It is important to note that selection of these three scales does not imply that people who receive peer tutoring at the school were predominantly mentally retarded or physically unattractive, or that attitudes toward tutees would be the same as attitudes toward mentally retarded and unattractive people. What these groups have in common is that they are likely to be perceived <u>negatively</u>. The hypothesis tested with these scales was that NHS members' attitudes toward people who receive peer tutoring are related to their involvement in peer tutoring.

In order to examine the ability of these scales to discriminate between attitudes toward people who receive tutoring and attitudes toward people who are not slow learners, NHS members were asked to rate students at their high school and NHS members as well as people who receive tutoring. It was predicted that tutees would receive more negative ratings than would students at the high school, who in turn would be rated more negatively than NHS members. Finally, the questionnaire also asked NHS members who had a tutee to rate their own tutee on these scales. These ratings

were included because it seemed likely that students' attitudes toward their own tutee might better predict their level of involvement in peer tutoring than would their attitude toward tutees in general.

To summarize, the attitude toward the object version of the questionnaire include three measures of NHS members' attitudes toward people who receive peer tutoring, their own tutee, students at their high school, and NHS members.

Finally, both the behavioral beliefs version and the attitude toward the object version of the questionnaire included self-report measures of the students' involvement in peer tutoring during the six weeks prior to administration of the questionnaire. One question asked them if they had met with a tutee, and the second question asked them how many hours per week they had spent in peer-tutoring.

Questionnaire Administration

At the beginning of the first six week interval, NHS members were randomly assigned to complete either the behavioral beliefs version or the attitude toward the object version of the questionnaire. At the end of the first interval, those who had completed the behavioral beliefs version completed the attitude toward the object version, and those who had completed the attitude toward the object version were asked to complete the behavioral beliefs version. At the end of the second six week interval, all subjects completed a brief questionnaire that included only the behavioral measures. Thus, subjects completed a total of three questionaires at six week intervals.

All questionnaires were completed during regularly scheduled meetings of the NHS. Students' anonymity was preserved by the use of code numbers. The questionnaires were administered and collected by the second author of this paper. She is not affiliated with the high school in any capacity, and was not known to the NHS members until the beginning of this study. Except for scheduling the meetings during which the questionnaires were completed, the NHS advisor was not involved in admimistration of the questionnaires. Students required approximately 15-20 minutes

to complete these questionnaires.

Results

Students' intentions to peer tutor were correlated with their self-reports of whether they met with their tutee and the number of hours per week they spent tutoring during the six week interval following the assessment of intention. The last column on Table 1 shows that both behavioral measures were highly correlated with behavioral intention for both six week intervals.

The hypothesis that attitude toward the behavior and subjective norm are the determinants of intention was tested by multiple regression analysis. The multiple correlation between these predictors of intention and intention was .68 for both six week intervals. The standardized regression coefficients (See Table 1) show that attitude toward the behavior received a significant weight in predicting intention but subjective norm did not. Fishbein's inclusion of weighting parameters in the equation for predicting behavioral intention reflects the theory's assumption that the relative importance of the attitudinal and normative components can vary depending on the particular action assessed, the context in which it occurs, and characteristics of the population being assessed. Consequently, the finding that subjective norm was not an important predictor of intentions to perform this particular behavior is not inconsistent with the theory for it requires only that the weighted sum of the attitudinal and normative components be highly correlated with intention.

Multiple regression analysis also was used to test the theory's contention that attitude toward the behavior and subjective norm can be substituted for the direct measure of intention to predict behavior. As can be seen in Table 1, these multiple correlations ranged from .45 to .68, and all were significant.

In a final multiple regression analysis, the sum of subjects' beliefs about the consequences of peer tutoring weighted by their evaluation of these consequences was substituted for attitude toward the behavior, and the sum of their beliefs about what specific referents thought they should do weighted by their

motivation to comply was substituted for subjective norm. Since only half the subjects completed the behavioral beliefs version of the questionnaire at the beginning of each six week interval, the sample size for this analysis is relatively small (n=18 for the first six week interval; n=20 for the second six week interval). Consequently, rather than perform multiple regression analyses for each six week interval, the two groups of subjects were combined for a single regression analysis on each criterion variable. Thus, the behavioral criterion for subjects who completed the behavioral beliefs version of the questionnaire at the beginning of the first six week interval was their behavior during the first six weeks. Similarly, the behavioral criterion for subjects who completed this questionnaire at the beginning of the second six week interval was their behavior during the second six weeks. Finally, the behavioral intention measure used for this analysis was the measure subjects completed when they received the behavioral beliefs version of the questionnaire.

The multiple correlations between the sum of behavioral beliefs times evaluations and normative beliefs times motivation to comply with behavioral intention, the number of hours students spent in peer tutoring, and whether they met with their tutee are shown on Table 2. All of these multiple correlations were significant, but the correlation with intention was relatively low ($\underline{r}$=.49). Curiously, this correlation was substantially lower than that obtained for the number of hours students spent in peer tutoring. (r=.61)

Since correlation coefficients are sensitive to outliers, we examined the distribution of scores on the predictor variables for extreme scores. One subject's behavioral beliefs times evaluations score was 2.7 standard deviations below the mean ($\underline{M}$ = 30.78) and .75 standard deviations below the <u>second lowest</u> score. To test the possibilitity that this subject might account for the relatively low correlation with intention, the multiple correlations were recomputed with this subject's data deleted. Deletion of this subject's data raised the multiple correlation with intention from .49 to .62, but did not substantially alter the correlations with number of hours spent in tutoring ($\underline{r}$=.58) or whether subjects met

with their tutee. (r=.53)

The final analysis conducted on the behavioral beliefs version of the questionnaire was to identify the specific beliefs about the consequences of the behavior, evaluations of these consequences, normative beliefs, and motivation to comply with these referents that discriminate between those who intended and did not intend to peer tutor for 1-2 hours per week during the six week interval following completion of the behavioral beliefs version of the questionnaire. Subjects who scored above the midpoint of the intention scale (n=25) were classified as intenders and those who scored at or below the midpoint were classified as nonintenders (n=13).

Table 3 shows the mean rating of these two groups on individual items on the behavioral beliefs questionnaire. Comparisons with t-tests revealed that intenders believed performing the behavior was more likely to help the tutee, leave them enough time to do their own work, and leave them enough time to be with their friends than did nonintenders. These two groups did not differ significantly in their evaluation of any of the consequences of the behavior. Intenders also were more likely than nonintenders to believe that their tutee thought they should peer tutor, but the two groups did not differ in their beliefs about any other salient referents. Finally, compared to nonintenders, intenders reported being <u>less</u> motivated to comply with what their parents thought they should do.

A second analysis compared students who said they met with their tutee at least 1-2 hours per week (n=23) during the six weeks after they completed the behavioral beliefs version of the questionnaire to those who said they met with their tutee for less than 1-2 hours per week (n=14) during this time.

All of the differences that occurred between ratings of intenders vs. nonintenders also occurred in ratings of students who met regularly vs. those who did not met regularly, except that students in the latter two groups did not differ significantly in their motivation to comply with their parents.

In addition, students who met with their tutee regularly reported being more motivated to comply with what their tutee

thought they should do (M=2.26) than did students who met with their tutee irregularly or not at all (M=1.29), $t_{(35)}$=2.58, p<.02. They also thought peer tutoring was more likely to give them a chance to meet a new person (M=2.57) than did students who did not meet regularly (M=1.57), $t_{(35)}$=2.3, p<.03.

Attitude Toward Object Measures

The first step in analyzing the attitude toward object measures was to ascertain whether these scales could discriminate between ratings of NHS members, students at the high school, and students who receive peer tutoring. Comparison between all subjects' ratings of these three groups (See Table 4) showed that students who receive peer tutoring received significantly lower ratings than did students at the high school, who in turn received significantly lower ratings than did NHS members. This pattern occurred for all three attitude toward the object scales.

The attitude toward the object version of the questionnaire also asked subjects who had a tutee to rate their tutee on these scales. As can be seen in Table 4, these students expressed more positive attitudes toward their own tutee than toward tutees in general. Moreover, their attitudes toward their own tutee were as positive as the attitudes they expressed toward students at their school on the social desirability and Guskin Scales, and were more positive than their attitudes toward students at their school on the adjective checklist.

The second step in analyzing the attitude toward object measures was to determine if these measures correlated with the students' involvement in peer tutoring. Since only half the students completed these measures at the beginning of each six week interval, the sample sizes for each interval are relatively small (n=17 for first six week interval; n=23 for the second six week interval). Consequently, these two groups were combined. That is, the behavioral criterion was students' self-reported behavior during the six weeks following their completion of the attitude toward object version of the questionnaire.

The correlations between students' attitude toward people who receive peer tutoring and their behavior were consistently low. They ranged from -.16 to .04 (See Table 5). Examination of the

distribution of scores on these attitude measures for the presence of extreme scores revealed that on the social desirability scale, one subject's score fell 2.57 standard deviations below the mean and one standard deviation below the next lowest score. However, this extreme low scoring subject also did not meet with his/her tutee, hence deletion of this subject's data produced correlations that ranged from -.25 to -.05. None of these correlations were significant.

The correlations between students' attitudes toward their own tutee and their behavior produced a different pattern. On all three attitude scales, there was a trend for students who expressed more positive attitudes toward their own tutee to meet at least once with their tutee. However, Table 5 shows that the correlation with this behavior was significant only for the social desirability scale. None of the correlations between the measures of students' attitudes toward their own tutee and the number of hours per week they spent peer tutoring were significant.

Since there was some evidence of a relationship between students' attitudes toward their own tutee and their meeting at least once with their tutee, we computed partial correlations between these measures. The control variables for these partial correlations were the attitude toward the behavior and subjective norm measures that students completed on the attitude toward object version of the questionnaire. The issue addressed by these partial correlations was whether students' attitude toward their own tutee would continue to be a significant predictor of their behavior when the effects of the components of Fishbein's theory were removed.

Results of this analysis showed that with attitude toward the behavior and subjective norm statistically controlled, the correlations between students' meeting at least once with their tutee and their ratings of their tutees on the social desirability, adjective checklist, and Guskin measures were reduced to .23, .11, and .20 respectively (All p's $\geq .10$).

One explanation for the effects of holding constant the components of Fishbein's theory on the correlations between the attitude toward the object measures and behavior is that attitude toward the object, like any variable not included in Fishbein's

theory, may be predictive of behavior if it influences (i.e., is correlated with) one or more of the components of Fishbein's theory. Table 5 shows the simple correlations between the attitude toward object measures and the components of Fishbein's theory. Since students' attitudes toward people who receive peer tutoring were unrelated to their behavior, it is not surprising that these attitude toward object measure also were uncorrelated with intention, attitude toward the behavior, and subjective norm.

Similarly, since there was a trend for students' attitudes toward their own tutee to be related to their meeting at least once with their tutee, there should also be a trend for these attitude measures to be correlated with the components of Fishbein's theory. Although some of these correlations were significant, there was one finding that was inconsistent with Fishbein's theory. Students' ratings of their own tutee on the social desirability scale were not significantly correlated with attitude toward the behavior or subjective norm, but were correlated with behavioral intention and meeting at least once with their tutee. This finding suggests that students' attitude toward their own tutee (as measured by the social desirability scale) may have influenced behavior independently of the variables (attitude toward behavior and subjective norm) Fishbein specifies as the determinants of intention and behavior.

It should be noted, however, that the partial correlation analysis described previously showed that students' ratings of their own tutee on the social desirability scale were not a significant predictor of their behavior when attitude toward behavior and subjective norm were statistically controlled. Thus, it appears that although the latter two variables were only weakly related to students' ratings of their tutees on the social desirability scale, the interrelationships of these variables can account for the significant correlation obtained between ratings on the social desirability scale and peer tutoring behavior.

Discussion

Results of this study show that high school students' involvement in their school's peer tutoring program was predictable from the variables specified by Fishbein's theory. The best

predictor of their behavior was their intention to peer tutor. Behavioral intentions were highly correlated with the weighted sum of their attitude toward this behavior and their perception of what most people thought they should do. For this behavior, attitude toward the behavior was a more important predictor of intention and behavior than was subjective norm. Consistent with this finding, differences between students who intended to peer tutor regularly and those who did not intend to perform this behavior occurred primarily on measures of the antecedents of attitude toward the behavior. That is, students who intended to peer tutor regularly thought that peer tutoring was more likely to result in positive consequences than did students who did not intend to tutor regularly.

In contrast, students' attitudes toward people who receive peer tutoring were unrelated to their peer tutoring behavior. This finding is consistent with previous research (Wicker, 1969) which indicates that global measures of attitude toward the object of a behavior are not closely related to behavior. The more specific measures of students' attitudes toward their own tutee were predictive of their behavior. However, these relationships were inconsistent and relatively weak. The only significant correlation was between students' ratings of their tutees on the social desirability scale and their meeting at least once with their tutee.

Although this study provides support for all the hypotheses tested, there are some issues that warrant attention in interpreting these results. First, the behavioral measures were self-report measures. It is possible that students may have inaccurately reported their behavior. In particular, they may have been motivated to present their behavior as consistent with the beliefs, attitudes, and intentions they reported. However, the fact that students' responses to the questionaires were anonymous, and that six weeks elapsed between measures of the predictor variables and the behavioral self-reports should reduce the students' motivation and their ability to exaggerate the correspondence between their behavior and their responses to the predictor questions.

Second, the students who received peer tutoring were a diverse group of individuals whose major similarity was that they were "slow learners." Thus, this study does not provide direct evidence about the applicability of Fishbein's theory to predicting behavior toward groups characterized by a specific type of intellectual impairment. However, the existence of a large number of studies demonstrating that Fishbein's theory is useful in predicting a broad range of behaviors toward diverse objects, coupled with the results of the present study which illustrate its usefulness in predicting behavior toward "slow learners", suggests that Fishbein's theory is applicable to predicting behavior toward people with specific handicaps.

Third, it should be emphasized that Fishbein's theory was formulated to understand and predict performance of a specific behavior or set of closely related behaviors. Its development was stimulated by the finding that attitude toward object measures are poor predictors of specific behaviors. However, the theory does not contend that attitude toward the object of a behavior is irrelevant to behavior. Rather, the theory proposes that attitude toward the object is only one of several variables that might influence individuals' beliefs about the consequences of the behavior, their perception of the norms governing it and, consequently, their formation of intentions with respect to the behavior.

Finally, although results of this study suggest that behaviors toward slow learners are predictable, the beliefs that discriminated between those who intended and did not intend to perform the behavior examined in this study are obviously specific to this particular behavior and the context in which it occurred. On the one hand, the specificity of the variables Fishbein proposes as the predictors of behavior limits the generalizability of any test of his theory to the particular situation in which the test was made. On the other hand, behavior always occurs within a specific social situation, and thus measures used to predict it must be sensitive to the context in which it occurs.

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Table 1

Predicting Peer Tutoring Behavior with Behavioral Intention, Attitude Toward Behavior, and Subjective Norm

Criterion	Correlation Coefficients		Regression Coefficients		Multiple Correlation on Criterion	Correlation: Behavioral Intention with Criterion
	Aact	SN	Aact	SN		
First Six Week Interval						
Behavioral Intention	.66*	.33*	.61*	.19	.68*	1.00
Meet with Tutee	.65*	.29*	.62*	.11	.66*	.82*
Hours per Week	.67*	.37*	.61*	.17	.68*	.76*
Second Six Week Interval						
Behavioral Intention	.68*	.34*	.65*	.06	.68*	1.00
Meet with Tutee	.53*	.18	.55*	-.05	.53*	.71*
Hours per Week	.45*	.17	.46*	-.01	.45*	.62*

Note: Aact = attitude toward behavior; SN = subjective norm.

*$p \leq .05$

Table 2

Predicting Peer Tutoring Behavior with Determinants of Attitude Toward Behavior and Subjective Norm

Criterion	Correlation Coefficients		Regression Coefficients		Multiple Correlation on Criterion
	$b_i e_i$	$(NB_i)(MC_i)$	$b_i e_i$	$(NB_i)(MC_i)$	
Behavioral Intention	.42*	.37*	.34*	.27	.49*
Meet with Tutee	.48*	.31*	.43*	.18	.51*
Hours per Week	.54*	.44*	.44*	.30*	.61*

Note: $b_i e_i$ = Sum of behavioral beliefs times evaluations; $(NB_i)(MC_i)$ = sum of normative beliefs times motivation to comply.

*$p < .05$

Table 3

Mean Ratings of Intenders Versus Nonintenders

On Behavioral Beliefs Questionnaire

	Subject Classification on Intention Measure			
Questionnaire Item	Intenders	Nonintenders	Intenders	Nonintenders
Consequences of Behavior	Belief Ratings		Evaluations	
Helps Tutee	2.56	1.54**	2.92	2.92
Leaves time for my work	2.48	1.54**	2.68	2.83
Leaves time for friends	2.40	1.54*	2.56	2.77
Meets new person	2.32	1.92	2.16	2.46
Gets to know tutee	1.80	1.46	2.28	2.15
Accomplishes tutoring	1.08	1.00	2.52	2.62
Takes time	1.88	1.15	.64	1.31
Referents	Belief Ratings		Motivation to Comply	
Parents	1.72	1.08	1.32	2.31**
Tutee	2.24	1.25**	2.04	1.69
NHS advisor	2.64	2.77	1.76	1.69
Teachers	1.96	1.54	1.16	1.62

**$t(36) \geq 2.18$, $p < .05$.

*$t(36) = 1.87$, $p < .07$.

Table 4

Mean Scores on Attitude Toward Object Measures

	Target Group			
Rating Scale	NHS Members	Students	Tutees	My Tutee
Adjective Checklist				
All Subjects	25.72_{a}	19.15_{a}	17.74_{c}	—
Subjects with Tutee	24.94_{a}	18.79_{b}	17.63_{b}	20.97_{d}
Social Desirability				
All Subjects*	67.58_{a}	60.19_{b}	57.70_{b}	—
Subjects with Tutee	66.03_{a}	59.35_{bc}	56.88_{b}	63.00_{ac}
Guskin Adjectives				
All Subjects	41.48_{a}	36.70_{b}	33.85_{c}	—
Subjects with Tutee	40.74_{a}	36.21_{b}	33.39_{d}	36.97_{b}

Note: Within each row, means without common subscripts differ significantly, $p < .05$.

*On this scale, the difference between ratings of students and tutees was marginally significant, $t(39) = 1.92$, $p = .06$.

Table 5

Correlation Coefficients for Attitude Toward Object Measures with Behavior and Components of Fishbein's Theory

	Peer Tutoring Behavior		Components: Fishbein's Theory		
Attitude Measure	Meet	Hours/Week	BI	Aact	SN
All Tutees					
Adjective Checklist	.04	.04	.08	.21	.16
Social Desirability	-.08	-.09	-.18	.05	.07
Guskin Adjectives	-.09	-.16	-.20	.02	.03
My Tutee					
Adjective Checklist	.27*	.24	.49**	.35**	.04
Social Desirability	.32**	.16	.29**	.25	.01
Guskin Adjectives	.27	.14	.24	.22	.11

Note: BI = Behavioral intention; Aact = attitude toward behavior; SN = subjective norm. Degrees of freedom range from 35 to 40 for correlations with ratings of people who receive tutoring and from 30 to 34 for correlations with ratings of students' own tutees.

**$p < .05$

*$p < .07$